



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/752,399	01/06/2004	Jing Chung Chang	SO-0033 US NA	3588
23906 7590 05/01/2008 E I DU PONT DE NEMOURS AND COMPANY LEGAL PATENT RECORDS CENTER BARLEY MILL PLAZA 25/1122B 4417 LANCASTER PIKE WILMINGTON, DE 19805				
EXAMINER BUTLER, PATRICK NEAL				
ART UNIT		PAPER NUMBER		
1791				
NOTIFICATION DATE		DELIVERY MODE		
05/01/2008		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTO-Legal.PRC@usa.dupont.com



UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/752,399
Filing Date: January 06, 2004
Appellant(s): CHANG ET AL.

Rakesh H. Mehta
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 25 January 2008 appealing from the Office action mailed 29 January 2008.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is substantially correct. The changes are as follows: The second grounds for rejection stated in the Appeal Brief incorrectly cites Howell et al. (US Patent Number 5,645,782) as the primary reference and fails to include Applicant's Admitted Prior Art (Second Information Disclosure Statement, paragraph 2, 28 November 2005). Howell et al. (US Patent Number 5,645,782) is incorporated by reference by Scott et al. (International Publication Number WO 99/19557) (see page 11, lines 16 and 17) in accordance with 31 CFR 1.57 (b).

To further clarify the changes, the actual second grounds of rejection is:
Claims 8, 11, 14, 20, 23, 24, 26, 29, 33, 41, 42, 46-48, and 50-54 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Scott et al. (International Publication Number WO 99/19557) in view of admitted prior art (Second Information Disclosure Statement, paragraph 2, 28 November 2005) and Hwo et al. (US Patent Application Publication No. 2002/0130433 A1).

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

5,645,782	Howell et al.	7-1997
5,804,115	Burton et al.	9-1998
2002/0130433 A1	Hwo et al.	9-2002
2002/0132116 A1	Wandel et al.	9-2002
2002/0147298 A1	Sun et al.	10-2002
WO 96/00808	Howell et al.	1-1996
WO 99/19557	Scott et al.	5-1999

Applicant's Admissions of the Prior Art (Second Information Disclosure Statement, paragraph 2, 28 November 2005)

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 1700

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 8, 11, 14, 20, 23, 24, 26, 29, 33, 41, 42, 46-48, and 50-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Howell et al. (International Publication Number WO 96/00808) in view of Hwo et al. (US Patent Application Publication No. 2002/0130433 A1), Wandel et al. (US Patent Application Publication No. 2002/0132116 A1), Sun et al. (US Patent Application Publication No. 2002/0147298 A1), and Burton et al. (US Patent No. 5,804,115).

With respect to claim 47, Howell teaches extruding poly(trimethylene terephthalate) to make BCF yarn. Howell teaches extruding poly(trimethylene terephthalate) with an intrinsic viscosity in the range of 0.6 to 1.3 (see page 2, lines 31-36), which reads on the claimed range of about 0.95 to about 1.04. Howell teaches using poly(trimethylene terephthalate) with water content less than 50 ppm (see page 11, lines 4-8). The filaments are converged (see Figure 2, Ref. #12 - filaments approaching Ref. # 14) and cooled (see page 2, lines 37-39). Howell teaches that the yarn is drawn at least 800 m/min. (see page 3, lines 10-15), which reads on the claimed range of greater than 3,500 m/min. Howell teaches drawing at a ratio of 3 to 4.5 (see page 5, lines 2-4), which reads on the claimed range of 1.1-4.0. The filaments have a denier between 4 and 25 (see page 6, lines 3-7), which reads on the claimed range of filament denier greater than 10. The total denier, interpreted by the examiner to be synonymous with yarn denier, is between 700 and 5,000 (see page 6, lines 3-7), which reads on the claimed range of yarn denier greater than 500. Howell teaches bulking the

Art Unit: 1700

drawn filaments (see page 3, lines 10-15), cooling the bulked continuous filaments (see Page 14, lines 32-34), intermingling prior to wind-up and winding up (see page 15, lines 27-30 and page 14, lines 35 and 36), which would make the apparatus used a wind-up machine.

Howell does not teach the specific molecular weight, a specific melt viscosity of the extruded poly(trimethylene terephthalate), the extent of speeds above 800 m/min, or using a single screw extruder.

Hwo teaches extruding poly(trimethylene terephthalate) with a draw speed of 2,450 to 10,000 m/min. (see page 2, paragraph 19), which reads on the claimed speed of greater than 3,500 m/min. It would have been obvious to combine Hwo's draw speed with Howell's process in order to maximize production speeds.

Hwo teaches using a single screw extruder to make poly(trimethylene terephthalate) (See [0025], [0038]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Hwo's single screw extruder in the poly(trimethylene terephthalate) extrusion process as taught by Howell in view of Hwo, Wandel, and Sun because the art, Hwo, recognizes the suitability for an intended purpose, which is to extrude poly(trimethylene terephthalate).

Howell in view of Hwo discloses the claimed invention except specific molecular weight and specific melt viscosity of the extruded poly(trimethylene terephthalate). However, it is inherent in melt extrusion of synthetic yarn spinning of polymers that a high melt viscosity such as 450 up to about 700 Pascal at 250 °C and 48.65 is needed

Art Unit: 1700

to effectively produce yarn, and it is inherent that polymers have high number average molecular weight of 29,000 to about 40,000. Furthermore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize a polymer with characteristics such as a number average molecular weight at least about 29,000 to about 40,000 and a melt viscosity of 450 Pascal up to about 700 at 250 °C and 48.65 per second shear rate to effectively extrude filaments to create yarn with desired denier at a desired speed, since it has been held that discovering an optimum value of a resultant effective variable involves only routine skill in the art. In re Boesch, 205 USPQ 215.

Moreover, Wandel teaches an example of poly(trimethylene terephthalate) with a melt viscosity of 325 Pa s, which demonstrates that melt viscosity of about 450 up to about 700 Pascal at 250 °C and 48.65 per second shear rate is taught. In view of Wandel's specification, the melt viscosity of 325 Pa s was an example, and could be optimized for resultant effective variables such as processing speeds and denier. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Wandel's optimizable melt viscosity with the process taught by Howell in view of Hwo in order to effectively practice extrusion of poly(trimethylene terephthalate) for filaments.

Moreover, utilizing proper melt viscosity is an optimized value of a resultant effective variable and involves only routine skill in the art, as previously described. Therefore, it would have been obvious to optimize the poly(trimethylene terephthalate) to have a melt viscosity of 350 up to about 700 Pascal at 250 °C.

Moreover, Sun teaches using poly(trimethylene terephthalate) with a number average molecular weight of less than 40,000 (see Page 5-6, Paragraph 67), which reads on the claimed average molecular weight of 29,000 to about 40,000. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Sun's molecular weight with the process taught by Howell in view of Hwo and Wandel because when a polyester composition is melt spun into fibers or filaments, long chain length linear polymer molecules are desirable (see Page 6, paragraph 70).

Howell does not explicitly teach that the BCF fibers are cooled with a cooling drum.

Burton teaches that a cooling drum 30 is used to cool bulked fibers (see col. 8, lines 8-10).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Burton's cooling drum to cool the poly(trimethylene terephthalate) filaments as taught by Howell in view of Hwo, Wandel, and Sun because methods of cooling are interchangeable to the extent that a cooling drum or other methods of cooling can be used to cool poly(trimethylene terephthalate) filaments (see col. 8, lines 8-16)

With respect to Claim 8, the range of melt viscosity of about 450 up to about 700 Pascal at 250 °C and 48.65 per second shear rate as previously described in the discussion of Howell et al. above reads on the claimed range of melt viscosity of 400-700 (Claim 6), 450-700 (Claim 7), and 500-700 (Claim 8).

With respect to Claim 11, Howell teaches filaments with a denier between 4 and 25 (see page 6, lines 3-7), which reads on the claimed range of filament denier of at least 15.

With respect to Claim 14, Howell teaches the total (yarn) denier between 700 and 5,000 (see page 6, lines 3-7), which reads on the claimed range of yarn denier at least 1000.

With respect to claim 20, Howell teaches coating the filaments with a spin finish (page 3, line 1), which reads on the claim language. The claim language allows for "optionally preintermingling the filaments", and because a process order is not claimed, it does not distinctly claim what intermingling is "pre-" to. The examiner interprets "pre-" to require intermingling be done before another portion the claimed process, which is taught by Howell by intermingling prior to wind-up (see page 15, lines 27-30).

With respect to claim 23, Howell teaches that the bulking of the drawn filaments is done in a 3-D manner (see page 3, lines 10-15).

With respect to claim 24, Howell teaches bulking the filaments by blowing and deforming with a hot-fluid jet bulking unit (see page 5, lines 5-12).

With respect to Claim 26, Howell teaches drawing at a ratio of 3-4.5 (see page 5, lines 2-4), which reads on the claimed range of 1.2 to about 3.0. Also, Hwo teaches drawing the filaments at a ratio of 0.7-3.0 (see page 2, paragraph 19), which reads on the claimed range of 1.2-3.0.

With respect to claim 29, Howell teaches extruding poly(trimethylene terephthalate) with an intrinsic viscosity in the range of 0.6 to 1.3 (see page 2, lines 31-36), which reads on the claimed range of about 0.98-1.04 (Claim 29).

With respect to Claim 33, Howell teaches using poly(trimethylene terephthalate) with water content less than 50 ppm (see page 11, lines 4-8), which reads on the claimed range of less than about 40 ppm (Claim 33).

With respect to Claim 34, Howell discloses the claimed invention except for having the entangling unit before the cooling unit. It would have been obvious to one having ordinary skill in the art at the time the invention was made to reverse the order of the units cooling and entangling, since it has been held that a mere reversal of the essential working parts of a device involves only routine skill in the art. *In re Einstein*, 8 USPQ 167.

With respect to Claims 41 and 42, Howell teaches carpets made from poly(trimethylene terephthalate) yarns that are twisted, heat set, and then tufted into carpet (see page 7, lines 1-8), which reads on the claimed process (claim 41) of ply-twisting and heat-setting the filaments and claimed product (claim 42) of carpet made from the carpet.

With respect to Claim 46, Hwo teaches that temperature and dwell decrease moisture within the polymer (See [0026]). Hwo further teaches setting the dryer to 130 °C (See [0027]), which reads on the claimed range of 80-150 °C.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Hwo's temperature for attaining desired moisture ppm

Art Unit: 1700

with Howell's extrusion process because Howell does not explicitly teach how to achieve poly(trimethylene terephthalate) with less than 50 ppm moisture content and Hwo's method of drying the same polymer attains the desired moisture for extrusion process.

With respect to Claim 48, Howell teaches bulking the filaments by blowing and deforming with a hot-fluid jet bulking unit (texturing nozzle) (see page 3, lines 10-15; page 5, lines 5-12 and 19-22; Fig. 2, Ref. No. 24).

With respect to Claims 50 and 51, Hwo teaches extruding poly(trimethylene terephthalate) with a draw speed of 2,450 to 10,000 m/min. (see page 2, paragraph 19), as previously described. This draw speed range reads on the claimed speeds of greater than 4,000 m/min. (claim 50), and greater than 3500 m/min. up to less than 5,000 m/min. (claim 51).

With respect to Claim 52, Hwo teaches drawing the filaments at a ratio of 0.7-3.0 (see page 2, paragraph 19), which reads on the claimed range of 1.4-2.2.

With respect to claims 53 and 54, Howell teaches extruding poly(trimethylene terephthalate) with an intrinsic viscosity in the range of 0.6 to 1.3 (see page 2, lines 31-36), which reads on the claimed range of about 1.00-1.02 (Claim 53), and about 0.95-1.02 (Claim 54).

Claims 8, 11, 14, 20, 23, 24, 26, 29, 33, 41, 42, 46-48, and 50-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scott et al. (International Publication Number WO 99/19557) in view of admitted prior art (Second Information Disclosure

Statement, paragraph 2, 28 November 2005) and Hwo et al. (US Patent Application Publication No. 2002/0130433 A1).

Scott et al. incorporates Howell et al. (US Patent Number 5,645,782) by reference (see page 11, lines 16 and 17) in accordance with 31 CFR 1.57 (b).

With respect to claim 47, Howell, as incorporated by Scott, teaches extruding poly(trimethylene terephthalate) to make BCF yarn. Howell teaches extruding poly(trimethylene terephthalate) with an intrinsic viscosity in the range of 0.6 to 1.3 (see col. 2, lines 1-6), which reads on the claimed range of about 0.95 to about 1.04, and with water content less than 50 ppm (col. 6, lines 37-41). The filaments are converged (see Figure 2, Ref. # 12 - filaments approaching Ref. # 14) and cooled (see col. 2, lines 7-9). Howell teaches drawing at a ratio of 3 to 4.5 (see col. 3, lines 22 and 23), which reads on the claimed range of 1.1-4.0. The filaments have a denier between 4 and 25 (see col. 3, lines 58-62), which reads on the claimed range of filament denier greater than 10. The total denier, interpreted by the examiner to be synonymous with yarn denier, is between 700 and 5,000 (see col. 3, lines 58-62), which reads on the claimed range of yarn denier greater than 500. Howell teaches bulking the drawn filaments (see col. 2, lines 19-24). Howell teaches cooling the bulked continuous filaments (see col. 2, lines 7-9). Howell teaches intermingling prior to wind-up and winding up (see col. 8, lines 62-65 and col. 8, lines 34 and 35).

Scott teaches drawing to a speed of 4,000-6,000 m/min (see page 12, lines 15-18), which reads on the claimed range of greater than 3,500 m/min. Scott teaches surrounding the new filaments with a hot tube (cooling drum) (see page 10, lines 4-6).

Scott lacks or does not expressly disclose polymers having the exact range of claimed intrinsic viscosity, number average molecular weight, and melt viscosity.

Admission discloses that polymers having the claimed intrinsic viscosity, number average molecular weight, and melt viscosity were commercially available from DuPont more than 1 year before the filing date of the instant application (Second Information Disclosure Statement, 28 November 2005, paragraph 2, lines 4-7).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize DuPont PTT commercially available polymer as taught by Admission in the process of manufacturing PTT yarn as taught by Scott because it would have been useful to use commercially available polymer in a process requiring PTT polymer, particularly given the polymers' having the same intrinsic viscosity required by Scott/Howell.

Scott does not explicitly teach using a single screw extruder.

Hwo teaches using a single screw extruder to make poly(trimethylene terephthalate) (See [0025], [0038]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Hwo's single screw extruder in the poly(trimethylene terephthalate) extrusion process as taught by Scott because the art, Hwo, recognizes the suitability for an intended purpose, which is to extrude poly(trimethylene terephthalate).

With respect to Claims 8 and 29, Admission discloses that polymers having the number average molecular weight and melt viscosity were commercially available from

Art Unit: 1700

DuPont more than 1 year before the filing date of the instant application (Second Information Disclosure Statement, 28 November 2005, paragraph 2, lines 4-7).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize DuPont PTT commercially available polymer as taught by Admission in the process of manufacturing PTT yarn as taught by Scott because it would have been useful to use commercially available polymer in a process requiring PTT polymer, particularly given the polymers' having the same intrinsic viscosity required by Scott/Howell.

With respect to Claim 11, Howell teaches filaments with a denier between 4 and 25 (see col. 3, lines 58-62), which reads on the claimed range of filament denier of at least 15.

With respect to Claim 14, Howell teaches the total (yarn) denier between 700 and 5,000 (see col. 3, lines 58-62), which reads on the claimed range of yarn denier at least 1000.

With respect to claim 20, Howell teaches coating the filaments with a spin finish (col. 2, line 10), which reads on the claim language. The claim language allows for "optionally preintermingling the filaments", and because a process order is not claimed, it does not distinctly claim what intermingling is "pre-" to. The examiner interprets "pre-" to require intermingling be done before another portion the claimed process, which is taught by Howell by intermingling prior to wind-up (see col. 8, lines 62-65).

With respect to claim 23, Howell teaches that the bulking of the drawn filaments is done in a 3-D manner (see col. 3, lines 28-36).

With respect to claim 24, Howell teaches bulking the filaments by blowing and deforming with a hot-fluid jet bulking unit (see col. 3, lines 5-12).

With respect to Claim 26, Howell teaches drawing at a ratio of 3-4.5 (see col. 3, lines 22 and 23), which reads on the claimed range of 1.2 to about 3.0.

With respect to Claim 33, Howell teaches using poly(trimethylene terephthalate) with water content less than 50 ppm (col. 6, lines 37-41), which reads on the claimed range of less than about 40 ppm (Claim 33).

With respect to claim 41 and 42, Howell teaches carpets made from poly(trimethylene terephthalate) yarns that are twisted, heat set, and then tufted into carpet (see col. 4, lines 26-37), which reads on the claimed process (claim 41) of ply-twisting and heat-setting the filaments and claimed product (claim 42) of carpet made from the carpet.

With respect to Claim 46, Hwo teaches that temperature and dwell decrease moisture within the polymer (See [0026]). Hwo further teaches setting the dryer to 130 °C (See [0027]), which reads on the claimed range of 80-150 °C.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Hwo's temperature for attaining desired moisture ppm with Howell's extrusion process because Howell does not explicitly teach how to achieve poly(trimethylene terephthalate) with less than 50 ppm moisture content and Hwo's method of drying the same polymer attains the desired moisture for extrusion process.

With respect to Claim 48, Howell teaches bulking the filaments by blowing and deforming with a hot-fluid jet bulking unit (texturing nozzle) (see col. 2, lines 19-24; col. 3, lines 24-30 and 36-38; Fig. 2, Ref. No. 24).

With respect to Claims 50 and 51, Scott teaches drawing to a speed of 4,000-6,000 m/min (see page 12, lines 15-18). This draw speed range reads on the claimed speeds of greater than 4,000 m/min. (claim 50), and greater than 3500 m/min. up to less than 5,000 m/min. (claim 51).

With respect to Claim 52, Hwo teaches drawing the filaments at a ratio of 0.7-3.0 (see page 2, paragraph 19), which reads on the claimed range of 1.4-2.2.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Hwo's drawing ratio with the process as taught by Scott in order to obtain desired crystallinity, orientation, tensile strength, and Young's modulus that accompany different drawing ratios (see Scott, page 11, lines 5-15).

With respect to claims 53 and 54, Admission discloses that polymers having the claimed intrinsic viscosity were commercially available from DuPont more than 1 year before the filing date of the instant application (Second Information Disclosure Statement, 28 November 2005, paragraph 2, lines 4-7).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize DuPont PTT commercially available polymer as taught by Admission in the process of manufacturing PTT yarn as taught by Scott because it would have been useful to use commercially available polymer in a process requiring

PTT polymer, particularly given the polymers' having the same intrinsic viscosity required by Scott/Howell.

(10) Response to Argument

Appellant's arguments beginning at page 12, first full paragraph, discuss Appellant's claimed specific operating parameters providing for continuous bulk continuous filament yarn production at greater than 3500 meters per minute and argues that since Howell does not provide a relationship to improve the draw speed beyond 2177 yd/min (about 1990 m/min) in Example 1, no conditions are taught for varying the various operating parameters for reaching the claimed speed.

In response to Appellant's arguments, Howell's teaching of drawing at greater than 800 m/min. (see page 3, lines 10-15) and example of yarn formation at 2177 yd/min (about 1990 m/min) in Example 1 are not exclusively relied upon to teach Appellant's claimed yarn formation speed. As combined, Hwo teaches extruding poly(trimethylene terephthalate) with a draw speed of 2,450 to 10,000 m/min. (see page 2, paragraph 19). Moreover, it is noted that Appellant also does not provide an indication of the relationship between the various operating parameters. Moreover, in view of the combined references teaching the claimed parameters and speed, it is noted that there is no showing that the filament yarn production at greater than 3500 meters per minute is unexpected results. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the references as relied upon to achieve the claimed process.

Appellant's arguments beginning at page 14, second full paragraph, discuss PTT not being in commercial use at the time of the present invention.

In response to Appellant's arguments, Howell teaches carpets made from poly(trimethylene terephthalate) yarns that are twisted, heat set, and then tufted into carpet (see page 2, lines 31-36 and page 7, lines 1-8). Thus, Howell clearly teaches that making PTT into carpet was well known at the time the invention was made.

Appellant's arguments beginning at page 15, second full paragraph, discuss combining references to modify more than one parameter as being unsupported.

In response to Appellant's arguments, in view of the teachings relied upon showing successful practice of making PTT fiber and the motivations relied upon, some amount of experimentation to modify the process parameters as taught by the combined references would be obvious.

Appellant's arguments beginning at page 16, first full paragraph, discuss Hwo pertaining to partially oriented yarn (POY) and Howell pertaining to bulk continuous filament (BCF) and conclude that combining the processes would not be possible because of their differences.

In response to Appellant's arguments, the process being POY indicates that the yarn has orientation just as Howell's process has since Howell's yarn would be oriented from drawing. Howell's process being BCF requires bulking of the yarn, which would utilize Hwo's high speed drawing to feed the bulking device. Therefore, while Appellant's arguments that the substantial differences that preclude or make the

Art Unit: 1700

combination unattainable have been considered, the arguments of counsel cannot take the place of evidence in the record.

Appellant's arguments beginning at page 17, first full paragraph, discuss relying on Wandel for a proper melt viscosity is improper because the PTT yarn is not made in a BCF process.

In response to Appellant's arguments, Wandel is relied upon for a proper melt viscosity for extruding PTT to make filaments. Wandel is not relied upon to provide for bulking to make a BCF yarn since Howell provides a teaching of how to provide bulking for bulk continuous filaments.

Appellant's arguments beginning at page 17, second full paragraph, discuss relying on Sun et al. for a proper molecular weight is improper because the PTT yarn is not made in a BCF process.

In response to Appellant's arguments, Sun et al. is relied upon for a proper molecular weight viscosity for extruding PTT to make filaments. Sun is not relied upon to provide for bulking to make a BCF yarn since Howell provides a teaching of how to provide bulking for bulk continuous filaments.

Appellant's arguments beginning at page 17, third full paragraph, discuss relying on Burton for utilizing a cooling drum PTT yarn is not disclosed as suitable for using a cooling drum.

In response to Appellant's arguments, Burton is relied upon since Howell requires yarn cooling and Burton's cooling is interchangeable with other multi-filament yarn spinning cooling methods (see Burton, col. 8, lines 8-16).

Appellant's arguments beginning at page 18, second full paragraph, discuss Scott's yarn spinning at 4000-6000 m/min. as not providing for an adjustment of Howell's BCF process to achieve drawn fibers at such speeds as claimed.

In response to Appellant's arguments concerning drawing, Scott's teachings are clearly specifying that the speed is done with drawing as the yarn goes through the draw zone before take-up at the speed of 4,000 to about 6,000 m/min (see page 12, lines 15-18). Concerning the bulking, as Howell is incorporated by Scott, Howell is relied upon for bulking of the filaments to form bulk continuous filaments (BCF).

Appellant's arguments beginning at page 18, third full paragraph, discuss the claimed process's PTT polymer as only "potentially could be made" and that such admission does not provide for how to process into bulk continuous filaments.

In response to Appellant's arguments, the claimed PTT polymers were specifically indicated as being sold by Appellant (see Second Information Disclosure Statement, paragraph 2, 28 November 2005). For processing, Scott, with Howell incorporated by reference, in view of Hwo are relied upon to teach BCF production in the claimed parameters. Moreover, given Howell's teaching of converting the PTT polymers into carpet, the claimed carpet would have been obvious upon supplying of the PTT used in the claimed process with the product-by-process nature of the claimed carpet.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

Art Unit: 1700

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Patrick Butler/

Examiner, Art Unit 1791

Conferees:

/Yogendra N Gupta/

Supervisory Patent Examiner, Art Unit 1791

/Jennifer K. Michener/

QAS, TC1700